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A Second Pre-Wisconsinan Locality for the Extinct Jamaican Rodent *Clidomys* (Rodentia: Heptaxodontidae)

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Clidomys is the most distinctive but least well known member of the late Quaternary terrestrial mammal fauna of Jamaica. Here we report the second dated locality for this genus. The Illinoian age we report further strengthens arguments we have made elsewhere, that *Clidomys* represents an early—probably pre-Wisconsinan—extinction that contrasts with the growing record of Holocene extinctions in the Antilles.

Clidomys is the only genus of heptaxodontid rodent known from the late Quaternary fossil record of Jamaica. It is known from five localities: Wallingford Roadside Cave (Anthony, 1920; Koopman and Williams, 1951; MacPhee, 1984; McFarlane and Gledhill, 1985; MacPhee et al., 1989); Lluídas Vale Cave (MacPhee, 1984); Sheep Pen 'Cave' (MacPhee, 1984); Molton Fissure (MacPhee, 1984), and the new locality reported here, Worthy Park I Cave (Jamaican metric grid: 2359-1661), St. Catherine Parish (Fincham and Ashton, 1967; Fincham, 1997). Of these sites, Molton Fissure has not been relocated since its discovery by H. E. Anthony almost 80 years ago and only the Wallingford Roadside Cave deposit has been dated (MacPhee et al., 1989).

In 1996 we removed a small quantity of heavily indurated bone 'breccia' from the vestibule of Worthy Park I Cave. The material yielded numerous carapace and plastron fragments of a large chelonian, a tooth in alveolus and limb bone fragments of *Geocapromys brownii*, an unidentified bird limb bone fragment, anuran limb bones, and a partial femur attributable on the basis of size and cross sectional morphology to *Clidomys*.

The Worthy Park I breccia is comprised of a flood-deposited cave mud that has been heavily indurated by secondary calcite deposition. The material is plastered onto the walls of the entrance chamber, and has been subsequently incorporated and partially obscured by extensive flowstone growth. A 34 g sample of clean flowstone directly overlying the bone breccia was selected for uranium-thorium disequilibrium dating by alpha counting. The sample showed no evidence of recrystallization or secondary alteration. It yielded an age of 174,000 yrBP with a one-sigma error of + 13,000/- 2,000 yr (²³⁴U/²³⁸U: 1.0239 ± 0.0190; ²³⁰Th/²³⁴U: 0.8028 ± 0.233; U concentration: 0.3 ppm). With a ²³⁰Th/²³²Th ratio of 90.94, no correction

for detrital thorium was required and the age fits clearly into isotope stage 6. Thus, the Worthy Park deposit is broadly contemporaneous with the isotope stage 6 age previously reported for the Wallingford Cave *Clidomys* site (MacPhee et al., 1989).

The Heptaxodontidae is a distinctive family of extinct, large-bodied caviomorph rodents that includes genera and species endemic to the islands of Jamaica, Hispaniola, Puerto Rico, and the Anguilla Bank (Anguilla, St. Martin, and almost certainly St. Barthélemy). The family is ultimately South American in origin (Flemming, in prep.). The extinction chronology of these animals is, like much of the Antillean mammal fauna, poorly constrained. Woods (1989) argued that all the Antillean heptaxodontids may have survived into the mid-Holocene, a view that has little basis in the geochronological record. *Amblyrhiza*, the Anguilla Bank form, has been shown with a high degree of probability to have been a Sangamonian high sea-level casualty (McFarlane et al., 1998). *Elasmodontomys* is known from Puerto Rico at 5400 yrBP (McFarlane, in prep.), but the evidence that *Quemisia* survived on Hispaniola into the mid-Holocene (Woods, 1989) or even the modern era (Miller, 1929) has yet to be confirmed (MacPhee and Flemming, in press).

The only specimens of *Clidomys* that have been reliably dated are of pre-Wisconsinan age. Furthermore, the extreme rarity of *Clidomys* in the face of eight decades of paleontological effort (Morgan, 1993; MacPhee, 1997) supports the view that *Clidomys* became extinct well before the deposition of the extensive latest Pleistocene and Holocene cave deposits which have been the focus of most paleontological work. In this respect, *Clidomys* joins its heptaxodontid cousin *Amblyrhiza* in that both extinctions substantially predate the devastating anthropogenic impacts that were to decimate the terrestrial Antillean mammals in the Holocene (MacPhee and Flemming, in press).

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